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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/852,660

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Felix Henry

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5109

5514

7590

05/13/2004

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

KJBLER, VIRGINIA M

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/852,660

Applicant(s)

HENRY ET AL.

Examiner

Virginia M Kibler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.9.10.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fei et al. ("Turbo-codes used for compressed image transmission over frequency selective fading channel") and Liang et al. (5,790,131).

Regarding claims 1 and 14, Fei et al. ("Fei") discloses a method of adjusting the compression of data representing physical quantities, the compressed data then being coded according to a coding mode in order to protect them against transmission errors, characterized in that it includes, as from a required compressed data size ( $R_T$ ) (Sect. V) and the steps of determining at least one characteristic of the coding mode (Sect. VI; Table 2), determining an effective size of the compressed data according to the required size and the at least one characteristic (Sect. VI; Table 2). Fei indicates adjusting compression ratio according to the effective size (Sect. VI, para. 1) but does not expressly disclose adjusting a compression parameter. However, Liang et al. ("Liang") discloses adjusting at least one compression parameter according to an effective size (Col. 8, lines 32-67, Col. 9, lines 1-6; Figure 1). Fei and Liang are combinable because they are from the same field of endeavor of compression and file size control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the adjusting of the compression ratio disclosed by Fei to

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expressly include adjusting at least one compression parameter. The motivation for doing so would have been because it is well known that there are a number of parameters which affect the size of a compressed representation generated by a compressor and the fidelity of the data set regenerated by a decompressor (Col. 2 , lines 3-35) and it is a routinely utilized methodology in the art.

Regarding claims 2 and 15, the arguments analogous to those presented above for claims 1 and 14 are applicable to claims 2 and 15. Fei discloses compressing the data and coding the compressed data (Figure 1; Sect. V).

Regarding claims 30/1, 30/2, 31/14, and 31/15, the arguments analogous to those presented above for claims 1 and 2 are applicable to claims 30/1, 30/2, 31/14, and 31/15.

Regarding claims 32/1 and 32/2, the arguments analogous to those presented above for claims 1 and 2 are applicable to claims 32/1 and 32/2.

Regarding claim 34, Liang discloses implementing in a computer program and the program executing on a personal computer (Col. 8, lines 32-46). Liang does not expressly disclose the storage medium as a floppy disk or CD-ROM. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide the program on a floppy or CD-ROM. Applicant has not disclosed that the floppy disk or CD-ROM provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the program stored on a hard disk or the claimed floppy disk or CD-ROM because both perform the same function of providing a storage medium for implementing the method and they are well known storage devices routinely utilized in data processing systems. Therefore, it would have

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been obvious to one of ordinary skill in the art to modify Liang to obtain the invention as specified in claim 34.

Regarding claims 3/1, 3/2, 16/14, and 16/15, Fei discloses the required size is determined automatically depending on the fixed bandwidth, signal-to-noise ratio, and delay spread (Sect. V).

Regarding claims 4/1, 4/2, 17/14, and 17/15, Fei discloses the required size is determined according to constraints related to subsequent decoding and decompression of the data (Sect. V).

Regarding claims 5/1, 5/2, 18/14, and 18/15, Fei discloses the coding mode processes the data by groups of predetermined length, and that the at least one characteristic of the coding mode is the predetermined length (Sect. IV; Sect. VI).

Regarding claims 6/1, 6/2, 19/14, and 19/15, Fei discloses that the coding mode is a turbocoding and that the characteristic is an interleaving length of the turbocoding (Sect. IV; Sect. VI).

Regarding claims 7/1, 7/2, 20/14, and 20/15, Fei discloses the coding mode is a convolutional coding (Sect. IV).

Regarding claims 8/1, 8/2, 9/1, 9/2, 10/1, 10/2, 11/1, 11/2, 21/14, 21/15, 22/14, 22/15, 23/14, 23/15, 24/14, and 24/15, Liang discloses there are a number of parameters which affect the size of a compressed representation generation by a compressor and the fidelity of data set regenerated by a decompressor (Col. 2, lines 4-35). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to choose a particular parameter. The parameters provide a means to adjust the compressed data. Therefore, it would have been obvious to one of ordinary skill in the art to modify Fei and Liang to obtain the invention as

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specified in claims 8-11 and 21-24 because it is well known to adjust various parameters depending on the desired degree of accuracy and size of the compressed data.

Regarding claims 12, 13/1, 13/2, 25, 26/14, and 26/15, Fei discloses determining an effective size according to the required size and the coding mode including the interleaving length (Sect. V-VI; Table 2). Fei does not expressly disclose the effective size as an integer multiple of the interleaving length or by rounding the required size. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specify an integer multiple of the S or by rounding  $R_T$  because it is a matter of design choice depending on the desired level of image quality and file size.

Regarding claims 27 and 28, Liang discloses using a personal computer including a microprocessor, ROM containing a program for processing the data, and RAM containing registers adapted to record variables modified during the running of the program (Col. 8, lines 32-46).

Regarding claims 29/14 and 29/15, Fei discloses including a decoder and a decompressor device (Figure 1).

#### ***Other Prior Arts Cited***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 5,677,689 to Yovanof et al. for fixed rate JPEG compliant still image compression; and

U.S. Pat. No. 6,072,836 to Hardiman for adaptive video compression and decompression.

***Contact Information***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Virginia Kibler  
05/06/04

MEHRDAD DASTOURI  
PRIMARY EXAMINER

